WHAT IS CLAIMED IS:

1. A method of attaching a moiety to a layered silicate surface, said method comprising the steps of:

covalently attaching said moiety to an arginine tag; and

contacting said arginine tag with said layered silicate surface.

2. The method of claim 1, wherein said arginine tag comprises at least two arginine residues.

3. The method of claim 1, wherein said arginine tag comprises from about two to about 100 arginine residues.

4. The method of claim 1, wherein said arginine tag consists of only arginine residues.

5. The method of claim 1, wherein said layered silicate is mica.

6. The method of claim 1, wherein said method further comprises contacting said layered silicate with a solution containing a sodium salt in a concentration sufficient to remove molecules bound to said layered silicate by non-specific ion exchange.

7. The method of claim 1, wherein said sodium salt is present in a concentration of at least 1 mM.

8. The method of claim1, wherein said moiety is a biological molecule.

9. The method of claim 8, wherein said biological molecule is a protein.

10. The method of claim 9, wherein said protein is chemically conjugated to said arginine tag.

11. The method of claim 9, wherein said protein is fused to the amino or carboxyl terminus of said arginine tag.

12. The method of claim 9, wherein said protein is recombinantly expressed as a fusion protein with said arginine tag.

13. The method of claim 9, wherein said protein is selected from the group consisting of a DNA binding protein, a molecular motor, an actin filament, a microtubule, a myosin filament, an actin binding protein, and a myosin filament binding protein.

14. A surface functionalized for the attachment of organic molecules wherein said functionalization is compatible with physiological sodium salt concentrations, said surface comprising a layered silicate contacted with an arginine tag molecule.

15. The surface of claim 14, wherein said arginine tag comprises at least two arginine residues.

16. The surface of claim 14, wherein said arginine tag comprises from about two to about 100 arginine residues.

17. The surface of claim 14, wherein said arginine tag consists of only arginine residues.

18. The surface of claim 14, wherein said arginine tag is covalently joined to a molecule selected from the group consisting of a protein, an antibody, a DNA binding protein, a molecular motor, an actin filament, a microtubule, a myosin filament, an actin filament binding protein, a myosin filament binding protein, a cell surface receptor, a growth factor, a hormone, and a nucleic acid.

19. The surface of claim 18, wherein said molecule is a polypeptide and said polypeptide is fused to the amino or to the caboxyl terminus of said arginine tag.

20. The surface of claim 18, wherein said polypeptide and said arginine tag and comprise a recombinantly expressed fusion protein.

21. A method of orienting a polypeptide on a layered silicate surface, said method comprising the steps of:

providing a polypeptide covalently linked to an arginine tag; and

contacting said arginine tag with said layered silicate surface.

22. The method of claim 21, wherein said arginine tag comprises at least two arginine residues.

23. The method of claim 21, wherein said arginine tag comprises from about two to about one hundred arginine residues.

24. The method of claim 21, wherein said arginine tag consists only of arginine residues.

25. The method of claim 21, wherein said layered silicate surface is mica.

26. The method of claim 21, further comprising contacting said surface with a sodium salt in a concentration sufficient to remove molecules bound to said layered silicate by non-specific ion exchange.

27. The method of claim 21, wherein said polypeptide is selected from the group consisting of a molecular motor, an actin filament, a microtubule, a myosin filament, an actin binding protein, and a myosin filament binding protein.

28. A surface bearing anisotropically oriented proteins, said surface comprising a layered silicate surface contacted with a plurality of proteins, each protein covalently attached to an arginine tag.

29. The surface of claim 28, wherein said arginine tag comprises at least two arginine residues.

30. The surface of claim 28, wherein said arginine tag ranges from about 2 to about one hundred arginine residues.

31. The surface of claim 28, wherein said arginine tag consists only of arginine residues.

32. The surface of claim 28, wherein said layered silicate is mica.

33. The surface of claim 28, wherein said protein is selected from the group consisting of a molecular motor, an actin filament, a microtubule, a myosin filament, an actin binding protein, and a myosin filament binding protein.

34. A method of purifying a target molecule from a heterogeneous mixture of molecules, said method comprising the steps of:

providing a target molecule attached to an arginine tag; and

contacting said target molecule with a surface of a layered silicate surface; whereby said target molecule binds to said surface.

35. The method of claim 34, wherein said arginine tag comprises at most two arginine residues.

36. The method of claim 34, wherein said arginine tag comprises from about two to about one hundred residues.

37. The method of claim 34, wherein said arginine tag consists only of arginine residues.

38. The method of claim 34, wherein said layered silicate is mica.

39. The method of claim 34, further comprising contacting said mica surface with a sodium salt.

40. The method of claim 34, wherein said contacting comprises flowing said heterogeneous mixture over one or more mica surfaces.

41. The method of claim 34, wherein said contacting comprises combining said layered silicate with said heterogeneous mixture.

42. The method of claim 41, wherein said method further comprises removing said layered silicate from said heterogeneous mixture.

43. The method of claim 42, wherein said removing comprises centrifuging said heterogeneous mixture.

44. The method of claim 34, further comprising the step of contacting said layered silicate with a compound selected from the group consisting of a potassium salt, an arginine, and a poly-arginine, in a concentration sufficient to release said target molecule.

45. The method of claim 34, wherein said target molecule is a fusion polypeptdide comprising a polypeptide fused to said arginine tag at the carboxyl or the amino terminus of said arginine tag.

46. The method of claim 45, wherein said fusion polypeptide further comprises a protease recognition site between said argininge tag and said target molecule.

47. The method of claim 45, wherein said fusion polypeptide is recombinantly expressed.

48. The method of claim 34, wherein said layered silicate is mica powder.

49. The method of claim 48, wherein said mica powder is contained within a chromatography column.

50. The method of claim 34, further comprising the steps of:

c) contacting said mica surface with a sodium salt;

d) and contacting said layered silicate surface with a compound selected from the group consisting of a potassium salt, an arginine, and a poly-arginine, in a concentration sufficient to release said target molecule.

51. An affinity purification device comprising a vessel having a fluid inlet port and a fluid outlet port wherein said vessel is filled with a layered silicate.

52. The affinity purification device of claim 51, wherein said layered silicate is mica powder.

53. The affinity purification device of claim 51, wherein said layered silicate comprises mica flakes.

54. The affinity purification device of claim 51, wherein said vessel contains an aqueous solution comprising sodium salts in a concentration sufficient to remove molecules bound to said layered silicate by non-specific ion exchange.

55. The affinity purification device of claim 51, wherein said inlet port further comprises a frit that is compatible with a syringe.